WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

PERMIT DETERMINATION FORM (PDF)

FOR AGENCY USE ONLY: PLANT I.D. # _____

PDF # _____ PERMIT WRITER: _____

RECEIVED
JAN 13 2017
WV DEP - DIVISION OF AIR QUALITY

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):
Touchstone Research Laboratory, LTD

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):
N/A

3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODE:
5 4 1 7 1 1

4A. MAILING ADDRESS:
1142 Middle Creek Rd.
Triadelphia, WV 26059

4B. PHYSICAL ADDRESS:

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE **MAP** AS **ATTACHMENT A**):
I70 to Wheeling, WV - take exit 5, turn right onto Rt 40 east. Travel about 1 mile, turn right onto Middle Creek Rd. Travel about 1 mile. Facility is on the right.

5B. NEAREST ROAD:	5C. NEAREST CITY OR TOWN:	5D. COUNTY:
Middle Creek Rd.	Triadelphia, WV	Ohio
5E. UTM NORTHING (KM):	**5F. UTM EASTING (KM):**	**5G. UTM ZONE:**
4432.6	532.1	17

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:
Fred Wade

6B. TITLE:
Engineer

6C. TELEPHONE:	6D. FAX:	6E. E-MAIL:
304-547-5800	304-5475802	fwade@cfoam.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):
0 6 9 – 0 0 0 8 3

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH **THIS** PROCESS (FOR AN EXISTING FACILITY ONLY):
R13-2578B

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST:
No

8A. TYPE OF EMISSION SOURCE (CHECK ONE):
☐ **NEW SOURCE** ☒ **ADMINISTRATIVE UPDATE**
☐ **MODIFICATION** ☐ **OTHER** (PLEASE EXPLAIN IN 11B)

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN?
☒ **YES** ☐ **NO**

9. IS *DEMOLITION* OR PHYSICAL *RENOVATION* AT AN EXISTING FACILITY INVOLVED? ☐ **YES** ☒ **NO**

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:	10B. DATE OF ANTICIPATED START-UP:
1 / 16 /2017.	1 / 23 /2017.

11A. PLEASE PROVIDE A **DETAILED PROCESS FLOW DIAGRAM** SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS **ATTACHMENT B**.

11B. PLEASE PROVIDE A **DETAILED PROCESS DESCRIPTION** AS **ATTACHMENT C**.

12. PLEASE PROVIDE **MATERIAL SAFETY DATA SHEETS (MSDS)** FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS **ATTACHMENT D**. FOR CHEMICAL PROCESSE, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. **REGULATED AIR POLLUTANT EMISSIONS:**

⇒ **FOR A NEW FACILITY,** PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ **FOR AN EXISTING FACILITY,** PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	**HOURLY PTE** (LB/HR)	**YEARLY PTE** (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM		
PM_{10}		
VOCs		
CO		
NO_x		
SO_2		
Pb		
HAPs (AGGREGATE AMOUNT)		
TAPs (INDIVIDUALLY)*		
OTHER (INDIVIDUALLY)*		

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL **SUPPORTING CALCULATIONS** AS **ATTACHMENT E.**

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112[b] OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. **CERTIFICATION OF DATA**

I, Brian E. Joseph (*TYPE NAME*) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A ***RESPONSIBLE OFFICIAL**** (*PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR*) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: Brian E. Joseph

TITLE: President/ CEO DATE: 1 / 11 / 2017

** THE DEFINITION OF THE PHRASE '***RESPONSIBLE OFFICIAL***' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

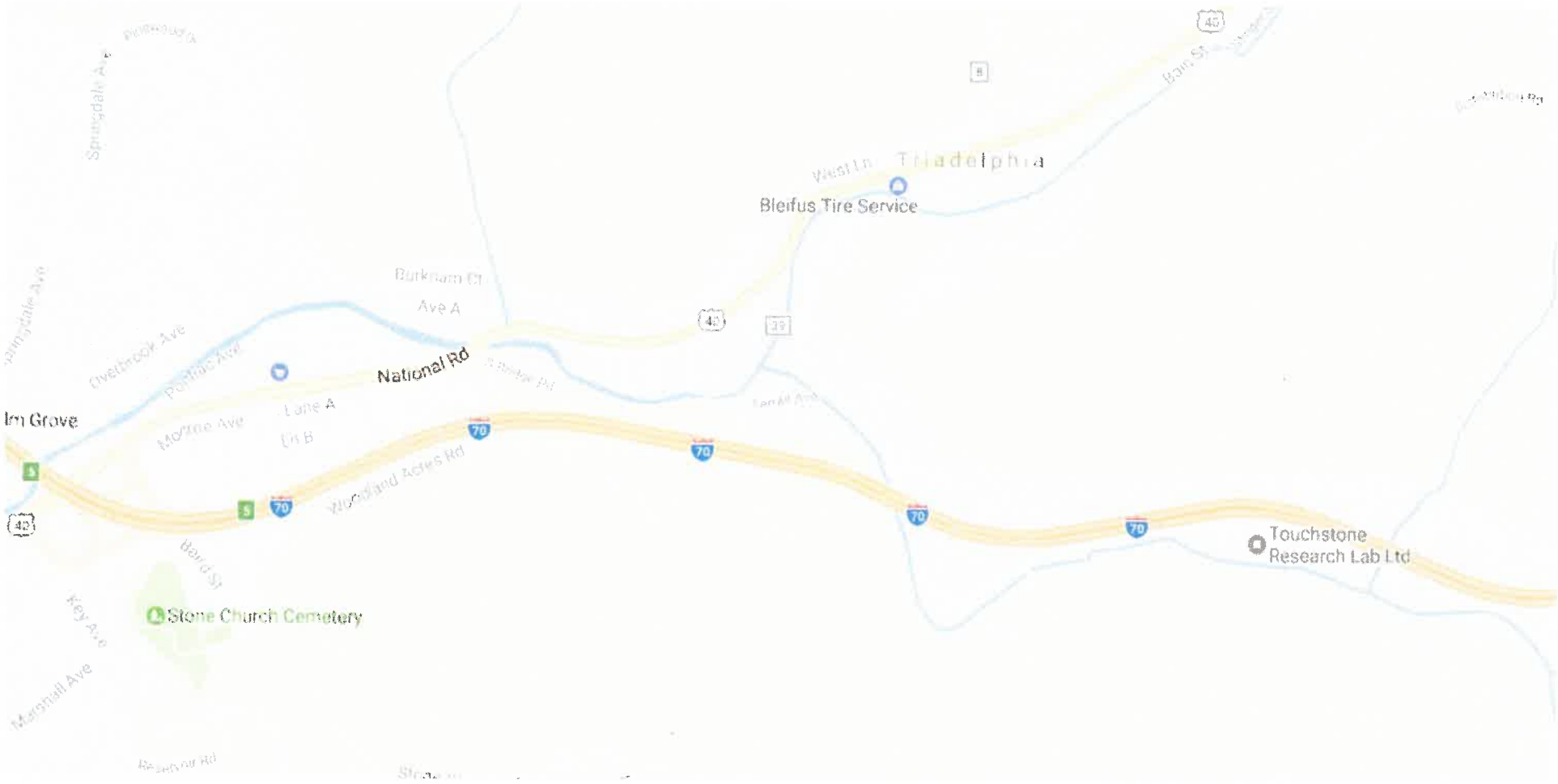
☐ **ATTACHMENT A** ☐ **ATTACHMENT B** ☐ **ATTACHMENT C** ☐ **ATTACHMENT D** ☐ **ATTACHMENT E**

RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment A



EXIT R70 @ EXIT 5.

RIGHT ON R40 EAST - @ TRAVEL APPROX. 1 MILE

RIGHT ON MIDDLE CREEK RD & TRAVEL 1 MILE.

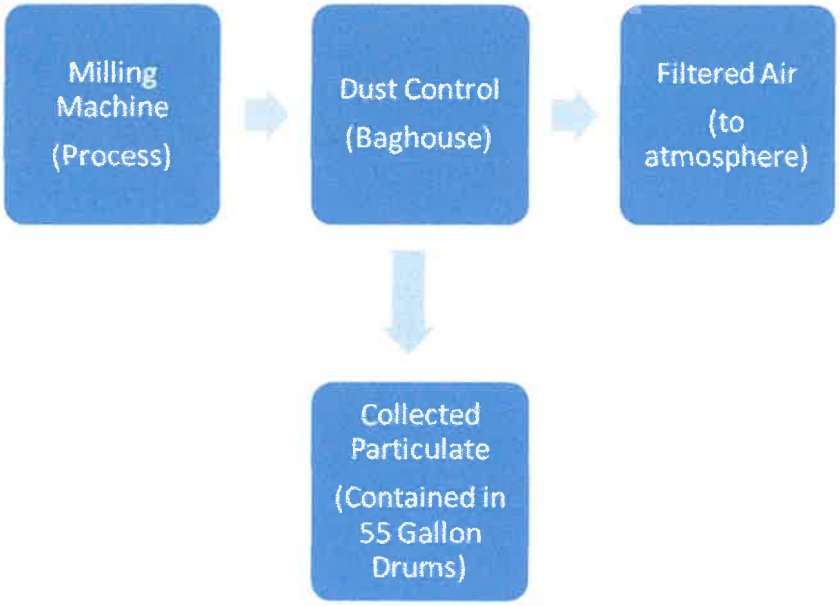
TOUCHSTONE IS ON THE RIGHT IN THE MILLENIUM CENTER.

Attachment B

Description

The facility is adding additional CNC milling equipment and associated dust collection system. Per the existing permit, R13-2578B, we propose adding these items as Emission Unit ID #10s and control device 10c.

Process Flow Diagram



Attachment C

Process Description

Calcined coal panels will be trimmed on a 3 axis CNC milling machine (final grinding/shaping). Grindings are removed from the CNC machine by mechanically sweeping and vacuum. Vacuum flows into the dust collection system. Solids are captured and deposited into sealed drums at the base of the system and air is filtered through the internal filter media in the top of the system. The milling machine is a DMS 3-axis CNC unit with two (2) 5ft x ft working tables with a full enclosure. The dust collection system is a Tiffin Environmental Products Model 48-CARTT-245.

MATERIAL SAFETY DATA SHEET

Please study this Material Safety Data Sheet (MSDS) and become aware of product health hazards and safety information. To promote safe use of this product, users should notify their employees, agents, and contractors of the information contained herein and any product hazards and safety information.

MANUFACTURER/SUPPLIER Touchstone Research Laboratory, Ltd. The Millennium Centre, Triadelphia, WV 26059	EMERGENCY TELEPHONE NUMBER 1-304-547-5800
TRADE NAME CFOAM Carbon Foams	MSDS NUMBER 2001
CHEMICAL NAME Coke	SYNONYMS Carbon, Graphite, Carbon Foam, Graphitic Carbon Foam
ACGIH LTV - 1989-1990 OSHA PEL - 1989	DATE OF ISSUE/REVISION 28 August 2008

1. HAZARDOUS INGREDIENTS

MATERIAL	PERCENT	ACGIH (TLV)	OSHA (PEL)
1. Calcined Coke (CAS #64743-05-1)	100	10 mg/m^3	10 mg/m^3

2. PHYSICAL DATA

APPEARANCE Black Porous Solid	ODOR None	MELT POINT >5000 °F	SPECIFIC GRAVITY Range: 0.1 to 0.8
VAPOR DENSITY (AIR = 1) Not Applicable	% VOLATILE BY VOLUME Not Volatile	BULK DENSITY Not Applicable	BOILING POINT Not Applicable
VAPOR PRESSURE Not Applicable	% SOLUBILITY (H_2O) Negligible	EVAPORATION RATE Not Applicable	OTHER Not Applicable

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT AND METHOD Not Applicable
FLAMMABLE LIMITS LEL: Not Applicable UEL: Not Applicable
EXTINGUISHING MEDIA Material is noncombustible. Dusts are combustible - Use water, carbon dioxide, dry chemical, or foam.
SPECIAL FIRE FIGHTING PROCEDURES Material in or near fires should be cooled with a water spray or fog. A self-contained breathing apparatus, operating in the positive pressure mode, and full fire fighting protective clothing should be worn for combating fires.
UNUSUAL FIRE AND EXPLOSION HAZARDS Thermal decomposition or combustion may produce dense smoke, oxides of carbon, and low molecular weight organic compounds whose composition has not been characterized. Finely divided carbon dusts form potentially explosive mixtures in

air at concentrations greater than 1.8 oz. per cubic foot.

4. HEALTH HAZARD DATA

LD50 ORAL (INGESTION)	LD50 DERMAL (SKIN CONTACT)	LD50 (INHALATION)
Not Established for Product	Not Established for Product	Not Established for Product

PRIMARY ROUTE OF EXPOSURE	THRESHOLD LIMIT VALUE (TLV)
Inhalation of dusts generated during processing or handling; dermal and ocular contact	Not Established for Product; see Section 1

EFFECTS OF OVEREXPOSURE

Acute: High concentration of carbon dusts may be irritating to the eyes, skin, mucous membranes, and respiratory tract.

Chronic: Inhalation of high concentrations of carbon dusts over prolonged periods of time may cause carbon pneumoconiosis. Symptoms can include cough, shortness of breath, and a decrease in pulmonary function.

Preexisting pulmonary disorders such as emphysema may possibly be aggravated by prolonged exposure to high concentrations of carbon dusts.

5. EMERGENCY AND FIRST AID PROCEDURES

For overexposure to particulate matter, remove the exposed person to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.

If the material enters the eyes, flush with water for at least fifteen (15) minutes. Seek medical attention if irritation develops or persists.

If material gets on the skin, wash thoroughly with mild soap and water. Seek medical attention if irritation develops or persists. Dermatitis should be treated symptomatically by a physician.

Ingestion is not expected to be an important route of entry into the body. If, however, the material is ingested, give two (2) glasses of water and induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

6. PHYSICAL HAZARDS

Carbon dusts are electrically conductive. Accumulations of dust may cause shorting of electrical circuits. Care should be taken to seal electrical circuits and switches that may be affected. Dusts should not be emitted to the atmosphere where they may settle on and cause shorting of outside electrical equipment.

7. SPECIAL PROTECTION INFORMATION

VENTILATION

If dusts are generated during processing or use, local exhaust ventilation should be provided to maintain exposures below the limits cited in Section 1. Design details for local exhaust ventilation systems may be found in the latest edition of "Industrial Ventilation: A Manual of Recommended Practices" published by the ACGIH Committee on Industrial Ventilation, P.O. Box 16153, Lansing, MI 48910. The need for local exhaust ventilation should be evaluated by a professional industrial hygienist. Local exhaust ventilation systems should be designed by a professional engineer.

RESPIRATORY

If exposures exceed the limits cited in Section 1 by less than a factor of ten (10), use as a minimum a NIOSH approved 1/2 facepiece respirator equipped with cartridges approved for particulate matter with an exposure limit of not less than 0.05 mg/m^3. If exposures exceed ten (10) times the limits cited in Section 1, consult a professional industrial hygienist of your respiratory protective equipment supplier for selection of the proper equipment. The evaluation of the need for respiratory protection should be determined by a professional hygienist.

EYE PROTECTION

Protective glasses with sideshields should be worn to prevent eye contact with particulate matter.

PROTECTIVE GLOVES	OTHER
Protective gloves are recommended to prevent cuts, abrasions, and irritation during handling and processing.	Where normal work clothes may become soiled by dusts, coveralls are recommended. Wash soiled clothing before reuse.

ALL CHEMICALS SHOULD BE HANDLED SO AS TO PREVENT EYE CONTACT AND EXCESSIVE OR REPEATED SKIN CONTACT. APPROPRIATE EYE AND SKIN PROTECTION SHOUL BE EMPLOYED. INHALATION OF DUSTS AND VAPORS SHOULD BE AVOIDED.

8. CHEMICAL REACTIVITY

CONDITIONS CAUSING INSTABILITY

None that are known. Material is stable. Hazardous polymerization will not occur.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong oxidizing and reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

See section 3 for possible combustion and/or thermal decomposition products. These would be expected only during emergency conditions.

SPECIAL SENSITIVITY

None that are known.

9. STORAGE INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in labeled, closed containers away from heat, sparks, open flames, and other sources of ignition. Do not store with or near incompatible chemicals cited in Section 8. Do not let containers of materials accumulate in the workplace. Promptly clean up any spills that may occur. Any dust generated during handling or processing should be cleaned up by wet mopping or vacuuming with a unit that contains a HEPA filter. Dry sweeping can resuspend particulate mater in the atmosphere.

10. SPILL, LEAK, AND DISPOSAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED Spilled or released materials should be picked up with a suitable implement and placed in DOT approved containers for disposal. Personnel involved in the cleanup should wear appropriate personal protective equipment. See section 7. Unauthorized personnel should be kept clear of the area of spills or releases. Do not allow material to enter storm or sanitary sewers, ground water, or soil. Releases may be reportable to local, state, or federal authorities.
EPA RCRA ID NUMBER Not applicable.
WASTE DISPOSAL METHOD Material should be disposed of in accordance with all applicable federal, state, and local regulations. Disposal in an EPA approved landfill is recommended.